

Sustainable Agriculture for a Sustainable Planet

In today's society we are challenged by the endangered state of our planet and the potential consequences for all life upon it. It is clear that strong and wide-reaching changes are needed... and that without delay. While there is general agreement that something has to be done, few realize what they themselves can contribute to address these challenges and their consequences.

This brief report provides an overview of the positive, multi-faceted influences (environmental, societal, economic) of sustainable agriculture in general and organic farming in particular, which can significantly reduce current problem-sources contributing to global challenges. Sustainable agriculture takes into consideration local conditions and needs, thus its methods may vary, depending on location. However the overall approach is the same: an integral combination of environmental, societal and economic aspects.

As for the term 'sustainable': this significant concept has increasingly been used as a buzzword to imply environmental and political correctness. This usage does not correspond with its inherent meaning of a long-term sustainable approach. Since the misuse has however not changed the meaning of sustainable, it is used here in its true sense.

Major global challenges include:

- degradation and depletion of natural resources soil, water and biodiversity;
- climate change and its effects (including changing weather patterns causing floods and/or water scarcity);
- the need to feed a growing population with sufficient food of good quality;
- high levels of poverty, particularly in rural areas;
- the necessity to generate jobs and income, and to further communities.

Key role of agriculture

One sector which is particularly relevant and where we have a direct influence is agriculture. In what way does agriculture influence these challenges? Conventional-industrial agriculture is a main factor: it contributes to the degradation of fertile land, the extensive demand of water for irrigation, high energy consumption and significant loss of biodiversity. It is also a major polluter through the use of harmful agrochemicals, and a significant contributor to climate change. This results in threatening the very basics of agriculture's capacity to produce sufficient food, as well as providing livelihood for billions of farmers, and those earning their income in the food and textile industry.

Out of this situation arises the critical question: In what way can we reshape agriculture so that it has a positive influence for today and the future? We need an agriculture that can feed the world without depleting our natural resources. We need an agriculture that can cope with a changing climate, as well as contributing to the mitigation of climate change, instead of causing it. And we need an agriculture that enables people to earn a living within a "greener economy". In short: an agriculture that is ecologically, economically and socially viable for the present, and in the long term.

What can organic agriculture contribute?

Organic agriculture is generally valued for producing high-quality, pesticide-free food. However the influence of organic agriculture goes much further. By applying the principles of health, ecology, fairness and care, it reduces many of the current challenges and their impacts, as well as having additional positive influences (see table below).

Issue	Specific benefits of organic agriculture
Soil	Soil fertility maintenance and improvement; Water infiltration and retention.
Water	Water quality: no harmful agrochemicals; Water quantity: increased soil water retention, less need for irrigation.
Biodiversity	Soil life: higher diversity of micro-organisms; Crop diversity: crop rotation and agro-forestry; Genetic diversity: traditional varieties, seed sovereignty; Eco-system services: wildlife, pollination, recreational value.
Energy	Lower energy consumption: energy intensive substances, such as artificial nitrogen fertilizer, not used.
Climate change	Mitigation: reduced greenhouse gas emissions from fertilizer application; increased carbon sequestration; Resilience: lower susceptibility to temperature increase, draught and high rainfall; Adaptation: improved agro-eco system that can cope with pests and diseases.
Food security and health	More diverse farms produce more food for local use; Products of high nutritional value; no agrochemicals or genetically modified organisms; Improved storability of food; less food losses.
Cultural and social dimensions	Strengthening agricultural communities and local cooperation; Valuing traditions and local knowledge and linking them with modern science; Inducing behavioural change of consumers (buying healthier food, less highly processed food, less meat, etc.).
Animal welfare	Ethical animal husbandry: free range rearing, appropriate feeding; Robust, healthy animals: less medication, no growth promoters.
Income and employment	Farm income: reduced input costs, fairer prices; Reduced risk: diversified organic farms are more resilient to adverse conditions (weather, markets); More jobs on farms and in local processing provide livelihoods for rural people.
Macro-economic viability	Creates less external costs (e.g. for environmental damage, water treatment, climate change consequences); Strengthens rural economies, reduces migration.

Most of these issues have been viewed and evaluated separately. However, looking at them in isolation does not reveal their wide range of influences. Many of them are interlinked and reinforce each other. Organically managed soils, for example, contain more organic matter. This results from their increased capacity to capture and store carbon, thereby reducing atmospheric CO₂ and contributing to climate change mitigation. The increased organic matter also improves the soil's capacity to capture and retain water, thus reducing the need for irrigation. These soils tend to be more productive and therefore contribute to farm incomes as well as food security. An additional positive influence is high crop diversity. Such fields are more resilient to fluctuations both in weather and in market demands. Avoiding agrochemicals as organic agriculture does, not only reduces their negative effects on ecosystems and humans, but also means less dependency on, and expenditure for, external inputs. Particularly in developing countries the result is more manual labour and therefore employing more people in farms, which in turn strengthens local economies. In addition they further contribute to local food security and support a balanced diet.



Making use of the potential

Being aware of the challenges we face and of the significant relevance agriculture has, we recognize the urgent need to re-shape it, and thus to further its positive effects on climate, water, soils and society. Changes are required at both the policy level as well as in day-to-day choices of each individual. We need to utilize the influence we have as a consumer, and choose organic products. Additionally we can further the needed changes by raising the awareness of others about the challenges we are confronted with, and how we can help reduce them by supporting the work of individuals, businesses and organizations, which practice sustainable organic agriculture. The socio-economic opportunities of organic agriculture are manifold and imply substantial business opportunities both for farmers and society in general.

Indeed, via our daily activities we have the potential, and therewith the responsibility, in our hands to restore the viability of a sustainable planet.

Supporting the outreach of organic agriculture

Organizations based on promoting organic agriculture are increasingly being founded around the world. These are of particular help for the local people. There are also international organizations, which are committed to helping in many countries and at the global level. Long experienced and leading in this is IFOAM, the International Federation of Organic Agriculture Movements (<http://www.ifoam.org/>). It promotes the adoption of ecologically, socially and economically sound systems that are based on the principles of organic agriculture. Here are some concrete examples on how you can support IFOAM to deliver far-reaching positive impact:

1. Help informing governments and other decision makers on how to make use of the potential of organic agriculture
2. Support advocacy campaigns on climate change, food security and inclusive development
3. Support training, education and awareness creation activities among farmers, consumers and decision makers
4. Support smallholder organic agriculture projects in developing countries

Selected key references on the potential and impact of organic agriculture

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<http://www.routledge.com/books/details/9781849712965/>
- SOAAN 2013: Best Practice Guidelines for Agriculture and Value Chains
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